Dating Violence and Self-Injury Among Undergraduate College Students: Attitudes and Experiences

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An Internet-based survey about dating violence and self-injury was completed by 1,777 undergraduates. A regression analysis tested if recent dating violence victimization and perpetration experiences predicted whether participants self-injured in the past 90 days, after controlling for demographic variables and attitudes toward self-injury and dating violence. Although the regression model explained only 6% of the variance in self-injury, the relationship may indicate a co-occurrence of dating violence and self-injury.

Two significant issues that can influence college students' functioning are dating violence and self-injury. Previous researchers have studied these issues as separate phenomena, but they have not determined what relationships, if any, exist between the two behaviors. The purpose of this study was to use a cross-sectional survey to explore the links between attitudes about and experiences of dating violence and self-injury among college students.

Dating Violence Among College Students

Dating violence involves abusive behaviors that occur within the context of a dating relationship, "a relationship in which two individuals share an emotional, romantic, and/or sexual connection beyond a friendship, but they are not married, engaged, or in a similarly committed relationship" (Murray & Kardatzke, 2007, p. 79). Dating violence can include various forms of abuse—including physical (Sugarman & Hotaling, 1989), sexual (Carr & VanDeusen, 2002), and psychological or emotional (Carr & VanDeusen, 2002; Murphy & Hoover, 1999)—and is common among college student populations. Reported rates of physical dating violence for college students range from 20% to 45% (Amar & Gennaro, 2005; Makepeace, 1981, 1986; Straus, 2004). Murray and Kardatzke concluded from a review of the literature that sexual dating violence victimization is experienced by approximately one third of female and one tenth of male college students. Psychological dating violence seems to be the most common form of college student dating violence, with one national study indicating that between 80% and 90% of male and female college students had been victims or perpetrators of psychological dating violence (White & Koss, 1991). Both men and women may be either perpetrators or victims of dating violence, although male-perpetrated violence is often of greater severity (Makepeace, 1986; Sugarman & Hotaling, 1989).

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To better understand the aforementioned prevalence statistics, researchers have begun to explore college students' attitudes toward dating violence. West and Wandrei (2002) presented 157 college students with videotaped situations depicting dating violence victims. Their findings indicated that male students, as compared with female students, were "somewhat more likely to hold generally violence-condoning, victim-blaming attitudes" (West & Wandrei, 2002, p. 981). College students' attitudes influence their likelihood of being involved in a violent dating relationship (Carr & VanDeusen, 2002; Pipes & LeBov-Keeler, 1997). For example, dating violence perpetration seems to be more likely among individuals who are more tolerant of violence against women (Carr & VanDeusen, 2002), and people involved in abusive relationships tend to believe that dating violence is more common than it actually is (Pipes & LeBov-Keeler, 1997).

Regardless of the type of violence that occurs within an abusive dating relationship, the general function of the violence is to maintain the perpetrator's power and control over the victim within a context of domination and manipulation (Lloyd & Emery, 2000; Smith & Donnelly, 2001). This context may make it more likely that an abused dating partner will remain in the abusive relationship in that this partner may come to accept the violent behaviors as normal (Pipes & LeBov-Keeler, 1997). Thus, a victim of dating violence may become increasingly isolated within that relationship, leading to further negative consequences, such as social isolation (Lloyd & Emery, 2000), physical injury resulting from the abuse (Amar & Gennaro, 2005), and mental health problems (Amar & Gennaro, 2005; Clements, Ogle, & Sabourin, 2005; Coffey, Leitenberg, Henning, Bennett, & Jankowski, 1996).

Self-Injury Among College Students

Self-injury is defined as "all behaviors involving the deliberate infliction of direct physical harm to one's own body [which causes tissue damage] without the intent to die as a consequence of the behavior" (Simeon & Favazza, 2001, p. 1). Self-injury encompasses a wide range of behaviors, and the most common forms of self-injury are cutting, skin picking, and burning (Trepal & Wester, 2006). Onset of this behavior often occurs around the age of 13 years, and both males and females have been found to self-injure, although discrepancies exist in the literature as to which gender engages in the behavior more often (e.g., Favazza, DeRosear, & Conterio, 1989; Trepal & Wester, 2006). Prevalence among college-age populations reportedly ranges between 12% and 35% (Favazza et al., 1989; Gratz, 2001). It is noteworthy that this prevalence is higher than in most other populations (e.g., 4% of the general population self-injures, 21% of clinical populations [Briere & Gil, 1998], and 14% of high school students [Ross & Heath, 2002]). The inpatient clinical population is the only group that has been found to have a higher prevalence rate (estimated up to 75%; Clarkin, Widiger, & Frances, 1983).

Researchers have proposed various reasons as to why individuals may engage in self-injury. One possible reason is to cope with traumatic memories of past childhood physical or sexual abuse (Crowe, 1997; Levenkron, 1998; Simeon & Favazza, 2001). Childhood abuse history and self-injury have been found

to have an 80% co-occurrence rate (Tantam & Whittaker, 1992). As one illustration, Levenkron provided a case study of a client who self-injured in a manner that re-created the sensation of childhood sexual abuse she received from her father to re-create the feeling of the relationship.

Individuals may also self-injure because of distress intolerance; for emotion regulation; as an attempt to stop thoughts, fears, or worries; to stop recurring memories; for self-punishment; as an expression of self-hatred; to gain attention from others; or as a form of coping (Alderman, 1997; Favazza, 1996; Gratz, 2003; Wester & Trepal, 2005). For example, an individual may self-injure in response to intense anger or sadness that seems too intense for the person to otherwise modulate or express. As another example, an individual may self-injure as a maladaptive coping method when facing stress if he or she lacks the necessary problem-solving skills.

We were unable to locate any previous research studies examining college students' attitudes toward self-injury. Therefore, two secondary purposes of this study were to begin to document college students' attitudes toward self-injury and to explore whether, as with dating violence, these attitudes are linked to self-injury experiences.

Theoretical Considerations: Developmental Issues and Coping

Two theoretical backgrounds informed this study: college student development theory and theories of coping. Erikson (1993) suggested that traditional-college-age individuals (i.e., 18- to 23-year-olds) are in a developmental stage that involves an increase in the formation of meaningful and intimate relationships (e.g., friendships, social support networks, and partner relationships). Within the context of negative relationship experiences (including, but not limited to, violent dating relationships), students will evaluate their needs for dependence, assurance, affection, and approval from those relationships (Chickering, 1978). Students who evaluate their relationships to be of great importance and who also demonstrate a high need for approval from their significant others may remain in negative relationships because of high levels of emotional attachment. College students who encounter negative relationship experiences may then use coping mechanisms—including both adaptive and maladaptive behaviors—to manage distress related to these experiences. Coping mechanisms include individuals' "efforts to manage demands, regardless of the success of those efforts" (Folkman, 1984, p. 843).

Coping strategies become particularly important to individuals experiencing dating violence because violence is not necessarily related to relationship dissolution (Bird, Stith, & Schladale, 1991). Dating violence victims often use coping strategies to manage their distress within their relationships or to try to convince their partners to change, rather than (or before) attempting to leave their relationships (Bird et al., 1991; Coffey et al., 1996). Victims of dating violence seem particularly likely to use strategies of disengagement (e.g., problem avoidance, wishful thinking, social withdrawal, self-destructive behaviors, and self-criticism; Tobin, Holroyd, Reynolds, & Wigal, 1989). For example, higher levels of dating violence victimization are as-

sociated with more frequent use of disengagement coping strategies (Coffey et al., 1996). Disengagement coping strategies, often referred to as *survival tactics*, can range from using alcohol or other drugs to dull and escape pain (Rosen & Stith, 1993) to self-injurious behavior that individuals use to "gain a sense of control over their lives and emotional experiences" (Kress, Trepal, Petuch, & Ilko-Hancock, 2007, p. 298). Although there has been minimal research that has examined the coping strategies used by individuals who self-injure, Wester and Trepal (2005) hypothesized that individuals who self-injure lack adaptive or engagement coping strategies. Overall, disengagement coping strategies can lead college students who are victims of dating violence to appraise their situations as uncontrollable, and, therefore, they decide to remain in their relationships, causing an elevated potential for harm (Folkman, 1984). The coping strategies used by dating violence perpetrators are also likely to be impaired in that they use maladaptive, violent behaviors to exert control and to respond to relationship distress.

Research Questions and Hypotheses

In light of these theoretical influences, this study explored the links between recent dating violence and self-injury in order to provide a beginning foundation for additional follow-up research, which will ideally lead to a fuller explanatory theory about dating violence, self-injury, developmental issues, and coping among college students. The current study examined two research questions, which were developed based on the existing research, the theoretical foundations for this study, and our clinical experience. Many of the existing studies that examine the prevalence of dating violence and self-injury among college students focus on lifetime rates. Because the theoretical foundation of this study is in college student development and coping theories, however, a focus on more recent experiences was warranted. We sought to determine the extent to which recent rates of dating violence and self-injury were similar to rates reported in the existing literature, thus leading to the first research question and hypothesis:

(1) How common are recent dating violence and self-injury experiences among college students?

Hypothesis 1: Participants will report experiencing recent dating violence victimization and perpetration and self-injury at rates similar to rates in previous research reported in the existing literature. In accordance with the literature reviewed in the previous section, we hypothesize that (a) at least 20% of the current sample will report experiences of dating violence victimization and/or perpetration and (b) at least 12% of the current sample will report engaging in self-injury.

Regarding the examination of the relationship between dating violence and self-injury experiences, we controlled for variables that could have influenced this relationship. As indicated earlier, prior research indicates that there may be gender differences in experiences of dating violence (Makepeace, 1986; Sugarman & Hotaling, 1989) and self-injury (Favazza et al., 1989; Trepal & Wester, 2006). Therefore, we controlled for gender in the analyses. In addition, because the sample recruited for the current study was drawn from a university's entire undergraduate population, it was likely to include both traditional- and non-traditional-age students. We also

controlled for age to account for potential influences of the different life experiences of these groups. Finally, attitudes toward dating violence and self-injury were also used as control variables. Because the existing research has indicated that attitudes toward dating violence are related to previous dating violence experiences (Carr & VanDeusen, 2002; Pipes & LeBov-Keeler, 1997; West & Wandrei, 2002), we also decided to control for a potential influence of attitudes toward self-injury, even though we were unable to locate any existing literature examining this relationship. These decisions led to the second research question and hypothesis:

(2) To what extent are previous dating violence victimization and perpetration experiences predictive of college students' likelihood of engaging in self-injury when controlling for demographic variables (age and gender) and attitudes toward dating violence and self-injury?

Hypothesis 2: Previous dating violence victimization and perpetration experiences, as well as attitudes toward dating violence and self-injury, will be significantly related to having engaged in self-injury within the past 90 days.

Method

Participants

From the entire undergraduate population enrolled in a midsize public university in the southeastern United States, we invited a random sample of 10,000 undergraduates older than 18 years to participate in this study. We obtained a randomly selected list of students and their contact information from the university's Office of Institutional Research. Only contact information available in the public domain was obtained. We invited all students on this list—which included freshmen, sophomores, juniors, and seniors—to participate in this study. We offered an incentive of a drawing for a $100 gift card for a retail store in an effort to increase the response rate, and we contacted each participant up to three times. Twenty-one e-mail messages were undeliverable. Of the 9,979 deliverable e-mail messages, 1,794 students completed the survey, for an overall response rate of 18%.

Of the 1,794 individuals who completed the survey, 17 graduate students were eliminated from the study because the focus of the study was undergraduate college students. Thus, the number of participants included in the analyses (not including graduate students) was 1,777. The sample was distributed fairly equally across undergraduate classes (22% freshman, 25% sophomore, 26% junior, and 27% senior). The majority of the respondents were female (79%) and Caucasian (74%), with 16% African American; 3% Asian American; 2% each for Hispanic, multiracial, and other; and less than 1% Native American. These percentages were very similar to those for the general population at the university. The average age of participants in the current study was 21.82 years ($SD = 5.47$).

Procedure

The e-mail messages sent to participants contained a link to the confidential survey, which was only available through an Internet-based survey company. Data collection occurred in October and November of 2006. In an effort to assist any participants who experienced emotional distress related to answering

questions about personal experiences of dating violence or self-injury, we provided all participants with a list of local campus and community resources.

Measures

Demographic Variables

The demographic questionnaire assessed participants' gender, age, ethnic background, year in school, and relationship status at the time of the study.

Experiences of Dating Violence and Self-Injury

Dating violence. Only participants indicating that they were in a dating relationship completed the dating violence experiences scales and reported only their experiences within the past month. Dating violence victimization experiences were assessed using the Abusive Behaviors Subscale (ABS) of the Relationship Scale by Clements et al. (2005). Participants were asked, "During the past month, to what extent does each of the following statements apply to your relationship?" Participants responded to eight items (e.g., "Sometimes I am scared by the way my significant other treats me in front of other people" and "Sometimes my significant other has used force when grabbing or holding me") using a 6-point Likert scale (0 = *not at all*, 5 = *completely applies*). The ABS has good internal consistency (α = .79; Clements et al., 2005). The reliability for the ABS in the current study was α = .86.

Dating violence perpetration experiences were assessed using items taken from the Dyadic Social Skills Questionnaire (DSSQ) by Capaldi (1994). Participants responded to the question "When you are with your partner, would you say that you have done the following things?" regarding seven abusive behaviors toward their partners (e.g., "Call your partner names," "Embarrass your partner in public," and "Sometimes hurt your partner [e.g., hit him/her or twist his/her arm]"). Responses were indicated using a 5-point Likert scale (1 = *not at all true*, 5 = *very true*). When using the DSSQ, researchers pull the most relevant items to create a scale specific to the construct under study (H. Kim, personal communication, May 24, 2006). In the present study, the seven items used to assess dating violence perpetration experiences demonstrated internal consistency of α = .85.

Self-injury. Participants' experiences of self-injury were assessed using a modified version of the Deliberate Self-Harm Inventory (DSHI; Gratz, 2001). The initial question on the modified DSHI asks participants, "Have you ever intentionally (or on purpose) hurt yourself (e.g., cut or burn self, pull hair, punch self, head bang, etc.)?" Participants in this study who responded affirmatively to this question completed the remaining questions on the DSHI, whereas participants who responded negatively skipped the remainder of the DSHI. Therefore, only participants indicating a history of self-injury completed the entire DSHI.

The remainder of the modified DSHI contains 12 items assessing the specific methods used to self-injure. These items were adapted from Gratz's (2001) DSHI in that items were combined if they duplicated a specific method of self-injury. For example, the original items "burning with a cigarette" and "burning

with a lighter or match" were combined into 1 item: ". . . burned skin (e.g., with a cigarette, lighter, match, etc.)." In addition, for this study, the item "hair-pulling" was added, because trichotillomania is a form of self-injury. The original DSHI assesses the lifetime frequency of various self-injurious behaviors. The modified DSHI assesses the frequency of ever having engaged in self-injury or having done so within the past 90 days. For the current study, only self-injury within the past 90 days was examined in the analyses. The scores on the modified version of the DSHI assessed (a) whether the participant had engaged in self-injury within the past 90 days, (b) the types and number of methods of self-injury the participant had used within the past 90 days, and (c) the frequency of engaging in self-injury during the past 90 days. In a study of college students, Gratz demonstrated that the DSHI has an internal consistency of $\alpha = .82$ and adequate construct validity. The reliability of the 12-item modified DSHI used for the current study was $\alpha = .70$.

Attitudes Toward Dating Violence and Self-Injury

Dating violence. The Attitudes Toward Dating Violence Scales (ADVS; Price, Byers, & the Dating Violence Research Team, 1999) was designed to assess adolescents' attitudes toward male- and female-perpetrated dating violence. We used a modified version of the Attitudes Toward Female Dating Violence Subscales (AFDVS), using language referring to *partner* or *partners* rather than *girl*, *boy*, *girlfriend*, or *boyfriend*. These modifications were made to be inclusive of same-gender relationships, use age-appropriate language for college students, and allow the use of one scale to assess attitudes toward both male- and female-perpetrated dating violence. No other modifications were made to the instrument. Participants indicated the extent to which they agreed with each of 37 statements using a 5-point Likert-type scale (1 = *strongly disagree*, 5 = *strongly agree*). Two examples of items from this scale are "Sometimes people have to threaten their partners so that they will listen" and "It is no big deal if someone shoves their partner."

The AFDVS was validated on a sample of 823 junior high and high school students (Price et al., 1999). The subscales demonstrated moderate to high internal consistency ratings: The Physical Dating Violence subscale demonstrated $\alpha = .81$ for male and $\alpha = .86$ for female participants, the Psychological Dating Violence subscale demonstrated $\alpha = .72$ for male and $\alpha = .78$ for female participants, and the Sexual Dating Violence subscale demonstrated $\alpha = .87$ for male and $\alpha = .78$ for female participants. Construct validity was assessed by examining the relationships between the AFDVS and a measure of traditional gender role expectations. We hypothesized that higher levels of accepting attitudes toward dating violence would be related to more traditional gender role expectations. The results revealed statistically significant correlations between the measure of traditional gender role expectations and all three AFDVS subscales in the expected direction. The internal consistency of the ADVS for the current study was $\alpha = .91$.

Self-injury. We were unable to locate a measure of attitudes toward self-injury. Therefore, we developed items specifically for this study based on existing

literature and common myths surrounding self-injury. The Attitudes Toward Self-Injury Scale (ATSS) contains seven items (e.g., "People who self-injure are crazy" and "Those who cut or burn themselves are only looking for attention from others") and was designed to mirror the format of the ADVS. Of the seven items, three items were reverse coded. Participants indicated the extent to which they agreed with each statement using a 5-point Likert-type scale (1 = *strongly disagree*, 5 = *strongly agree*); scores on responses are summed for a total scale score. The internal consistency of the ATSS in the current study was $\alpha = .77$.

Results

Prevalence of Dating Violence and Self-Injurious Behaviors

Among all participants, 51% ($n = 907$) indicated involvement in a current dating relationship. Of these participants, 48% reported that they had experienced some form of dating violence victimization in the past month, and 73% reported having perpetrated some form of dating violence against their partners in the past month. Thus, within the total sample, 24% had experienced some form of dating violence victimization, and 37% had experienced some form of dating violence perpetration within the past month. Therefore, Hypothesis 1(a) was confirmed. Scale scores on the ABS and the DSSQ give an indication of dating violence severity. (Table 1 reports the means, standard deviations, and observed and possible ranges for the instrumentation included in this study.) For dating violence victimization, the mean ABS score was 2.17 ($SD = 4.33$, possible range = 0 to 40), indicating a general low level of severity of dating violence victimization within this sample. For dating violence perpetration, the mean DSSQ score was 10.31 ($SD = 4.04$, possible range = 7 to 35), also indicating a general low level of severity of dating violence perpetration among this sample. Thus, although relatively high percentages of the

TABLE 1

Number of Participants Completing Each Assessment, Mean Scores, Standard Deviations, and Observed and Possible Ranges for Each Instrument

Instrument	*n*	*M*	*SD*	Observed Range	Possible Range
Abusive Behaviors Subscale[a]	900	2.17	4.33	0–31	0–40
Dyadic Social Skills Questionnaire[b]	907	10.31	4.04	7–35	7–35
Deliberate Self-Harm Inventory[c]	147	12.29	22.85	0–141	Self-reported range/week
Attitudes Toward Dating Violence Scales	1,363	57.39	15.98	37–181	37–185
Attitudes Toward Self-Injury Scale	1,498	28.13	4.03	8–35	7–35

[a]Measures dating violence victimization. [b]Measures dating violence perpetration. [c]Measures frequency of self-harm within past 90 days.

sample indicated some experiences of dating violence victimization or perpetration within the past month, the severity of these experiences was generally low.

Twenty-seven percent of participants indicated that they had ever engaged in self-injury, with 7% reporting that they had engaged in self-injury within the past 90 days. This finding confirms Hypothesis 1(b) for lifetime self-injury rates but not for current self-injury rates (i.e., within the past 90 days).

Of the participants who reported self-injuring during the past 90 days, students reported using up to nine methods of self-injury (e.g., cutting, burning), with an average of two ($SD = 1.45$) methods used. The modal number of methods was one method, with 52% of participants who self-injured in the past 90 days reporting using only one method. The most common methods of self-injuring within the past 90 days were cutting and purposefully hitting oneself to hurt or bruise oneself (44% each), followed by scratching skin and pulling hair (30% each). Approximately 27% reported preventing wounds from healing, 13% reported carving on their skin, 12% used pins or other sharp objects to poke into their skin, whereas 9% reported burning themselves, 7.5% reported biting themselves, and 6% rubbed their skin raw or until it bled with an object (e.g., sandpaper or an eraser). No participants indicated breaking their own bones during the past 90 days (2% of participants reported purposefully breaking a bone sometime during their lifetime). When asked where on their body they injured themselves, 19% indicated that the most common place was on the arm (9.3% specifically indicated the forearm), followed by 10% injuring themselves somewhere on their leg, 5.5% on their torso (including stomach, chest/breast, or back), 5% on their head or face, and less than 1% on their genitals.

Participants were asked to report the frequency of self-injurious behaviors during the past 90 days. Individuals averaged self-injuring 16 times per week ($SD = 25.46$) during the past 90 days, with a range from 1 time to more than 100 times per week. These numbers may be underestimates because some participants did not report numerical frequencies but gave responses such as "too many to count" or "innumerable."

Relationships Between Dating Violence and Self-Injury

Significant positive correlations were found between engaging in self-injury within the past 90 days and previous dating violence victimization experiences ($r = .13$, $p < .01$) and dating violence perpetration experiences ($r = .09$, $p < .01$). To further test the hypothesis that previous dating violence experiences and self-injury are related, we ran a linear probability model (see Table 2). A linear probability model refers to a linear regression model in which the outcome variable is dichotomous with no restrictions on the value of the independent variable (i.e., the independent variables can be continuous, interval, or dichotomous). This model tested whether previous dating violence victimization and perpetration experiences predicted whether or not participants had self-injured in the past 90 days (no self-injury within 90 days was coded as 0; self-injury within 90 days was coded as 1), after controlling

TABLE 2

Linear Probability Model Examining Relationship of Dating Violence and Self-Injury Within the Past 90 Days

Step and Variable	*B*	*SE*	β	*t*	ΔR^2
Step 1					.00
Constant	−.45	.09		−4.82**	
Gender[a]	.00	.02	.00	−0.06	
Age	.00	.00	−.07	−2.12*	
Step 2					.05
Attitudes toward self-injury	.01	.00	.23	6.26**	
Dating violence victimization	.00	.00	.19	2.92**	
Step 3					.01
Dating violence victimization	.01	.00	.10	2.65*	
Dating violence perpetration	.00	.00	.02	0.50	

[a]Reference male.
*$p < .05$. **$p < .01$, two-tailed.

for the demographic variables gender (male coded as 1, female coded as 2) and age and for participants' attitudes toward self-injury and dating violence. Demographic, attitudinal, and dating violence variables were entered in three separate steps to determine the amount of variance attributed to each variable. In the regression model, a subsample of 831 students was included to conduct the analyses. This included participants who reported being in a dating relationship and who responded to the DSHI.

The model we tested proved to be statistically significant ($F = 9.75$, $p < .0001$), and it explained 6% of the variance in whether someone reported engaging in self-injury within the past 90 days (adjusted $R^2 = .06$). Gender was not significantly related to self-injury ($\beta = .00$, $t = -0.06$, $p > .05$). However, age was found to be significantly and negatively related, with younger students reporting a higher probability of engaging in self-injury within the past 90 days compared with older students. Age and gender accounted for less than 1% of the variance explaining recent self-injurious behavior.

Attitudes toward self-injury ($\beta = .23$, $t = 6.26$, $p < .01$) and dating violence ($\beta = .19$, $t = 2.92$, $p < .01$) were significantly related to self-injury, with less accepting attitudes toward self-injury or dating violence relating to a lesser likelihood of engaging in self-injury. Combined, the attitudinal variables accounted for 5% of the variance. However, the analyses revealed that attitudes toward self-injury accounted for a greater amount of the variance as compared with attitudes toward dating violence.

Finally, dating violence victimization was also significantly and positively related to self-injury ($\beta = .10$, $t = 2.65$, $p < .05$). With more dating violence victimization experiences in the past month, there was a corresponding increase in the likelihood of engaging in self-injury within the past 90 days. Dating violence perpetration was not found to be significantly related to self-injury ($\beta = .02$, $t = 0.50$, $p > .05$). Dating violence victimization explained 1% of the variance for self-injuring during the past 90 days. Overall, Hypothesis 2

was partially confirmed, with dating violence victimization, attitudes toward self-injury, and attitudes toward dating violence—but not dating violence perpetration—being significantly related to the likelihood of having engaged in self-injury within the past 90 days.

A second regression model was run examining the impact of dating violence and attitudes toward dating violence and self-injury on the frequency with which someone self-injures. However, the model was not significant ($F = 1.92$, $p > .05$), and thus it is not reported in greater detail. This lack of significance indicates that dating violence does not seem to influence the frequency with which someone engages in self-injurious behaviors.

Discussion

Overview and Implications of Findings

The results of this study indicate that dating violence and self-injury are common issues among the college student population. This study revealed surprising results about self-injury prevalence rates. Most studies have reported that between 12% and 35% of college students self-injure (Favazza et al., 1989; Gratz, 2001); however, those frequencies have been for lifetime self-injury. We found in the current study that although 27% of participants reported that they had engaged in self-injury at some point in their lives, only 7% had engaged in self-injury during the past 3 months—indicating that the prevalence of self-injury on college campuses, although still notable, may be much smaller than previously believed. We therefore recommend that future researchers studying self-injury among college students differentiate between lifetime and current rates of self-injury.

The rates of dating violence victimization and perpetration in this study were comparable with the findings of previous researchers. However, the contrast between the percentages of students who had experienced dating violence victimization or perpetration (which were relatively high) and the severity levels of violence reported (which were generally low) indicates the importance of understanding dating violence as a complex phenomenon. In other words, prevalence rates alone may not reveal an adequately comprehensive picture of dating violence experiences among a college population. The rates in this study suggest that a large proportion of college students may perpetrate or be victimized by abusive relationship behaviors, but a smaller number of these students may experience extremely severe levels of dating violence. For college counselors, this indicates that broad-based educational programs that promote healthy relationship behaviors may be appropriate for general student populations. A smaller segment of the campus population may require more significant attention and support in order to leave abusive relationships or maintain personal safety within those relationships.

We believe that this is the first study to explore the relationships between dating violence and self-injury. The results demonstrate links between dating violence victimization, attitudes toward dating violence and self-injury, and actual self-injurious behavior within the past 90 days. It should be noted

that although relationships do exist, the direct relationship between dating violence and self-injury experiences is weak. This finding suggests the possibility that other factors connect the two issues, such as coping methods or histories of traumatic experiences. Individuals who are in violent dating relationships may use disengagement forms of coping (Coffey et al., 1996), which can include self-injury as well as other maladaptive coping strategies, such as substance abuse or avoidance. Another possibility is that as college students form intimate relationships and evaluate their needs in these relationships (Chickering, 1978; Erikson, 1993), those who experience dating violence might also have a difficult time establishing their identity as separate from the relationships, or they might use self-injury as a form of manipulation within their relationships.

As previously mentioned, another possible explanation for the relationship between dating violence victimization and recent self-injury could be a history of trauma. Researchers have found that a history of trauma, such as physical or sexual abuse and/or neglect, is related to both self-injurious behaviors (e.g., Levenkron, 1998; Simeon & Favazza, 2001) and experiencing dating violence (e.g., Carr & VanDeusen, 2002; Pipes & LeBov-Keeler, 1997). Additional research is needed to determine if the same underlying factors may contribute to the links between trauma history and self-injury and dating violence experiences among college students.

The results also indicated a significant relationship with self-injury both for age and for attitudes toward dating violence. Regarding age, future research is needed to determine why younger college students self-injure more frequently than do older college students. Possible explanations are that (a) younger college students may have a higher tendency than older college students to self-injure because of more exposure to and/or acceptance of self-injury or (b) younger college students may be more likely than older college students to experience difficulties with identity development. In general, college students may use their relationships to gain peer approval and assurance (Chickering, 1978; Erikson, 1993). Therefore, it is possible that younger college students—transitioning from high school—may have a harder time adjusting and may look for more assurance from relationships. As Bird et al. (1991) and Coffey et al. (1996) reported, some students may use maladaptive coping strategies to manage distress in their relationships before choosing to leave them—with self-injury being one alternative form of coping.

The relationship between attitudes surrounding self-injury and dating violence and actual self-injurious behavior warrants further examination. In the regression model we tested, attitudes explained the majority of the variance (i.e., 5% of 6%) in the model. Thus, those students reporting a higher acceptance of self-injury were more likely to engage in the behavior. This is an expected finding: Logically, individuals who engage in self-injury may be more tolerant of the behavior. In addition, they may have a better understanding that self-injury can be used as an effort to manage emotions or gain control. This finding also gives rise to the question of whether more positive attitudes toward self-injury might precede the behavior, which could justify efforts to provide more education about self-injury in the hope of preventing it.

Attitudes toward dating violence were also related to self-injury experiences, although to a lesser degree than attitudes toward self-injury. Here, we found that students with more accepting attitudes toward dating violence were more likely to engage in self-injury. This finding suggests that there may be a link between tolerance for violent behavior toward oneself and toward others. This finding may also suggest that college students in violent relationships are more tolerant of dating violence and ultimately look toward self-injury as one form of coping.

Recommendations for College Counselors

On the basis of the findings of this study, we urge college counselors to evaluate for possible comorbid experiences of self-injury and dating violence. The relationship, although not strong, between dating violence and self-injury may suggest another underlying concern—such as a lack of problem-solving or coping abilities—for students who present with both issues. Because the causal and explanatory pathways between dating violence and self-injury have yet to be identified, we encourage counselors working with students who present with co-occurring dating violence and self-injury experiences to explore the client's own perceptions of the relationship between the two experiences. Such exploration during the intake session or screenings might identify such areas of concern as use of self-injury to cope with dating violence or abusive relationships, clients' perceptions of their own dating victimization as a form of self-punishment, use of self-injury as a form of manipulating an abusive partner, or underlying self-esteem issues. In addition, college counselors should maintain a high level of knowledge about self-injury and dating violence, including warning signs, prevalence and severity rates, treatment issues, counseling strategies, and referral sources. Counselors often feel at a loss when attempting to understand self-injury (Zila & Kiselica, 2001). They may experience fear, repulsion, frustration, or other forms of ambivalence regarding the behavior or the client (Favazza, 1996; Himber, 1994). Therefore, counselors working with students who self-injure or experience dating violence must become highly aware of their personal responses to these phenomena. Because this area of research is in an early stage, effective counseling interventions for working with co-occurring dating violence and self-injury have not yet been studied. However, we recommend that college counselors work with their clients to ensure that each issue—and the links between them—is addressed adequately in treatment.

Study Limitations

This study was cross-sectional and correlational; therefore, causation cannot be established on the basis of its findings. The sample included college students enrolled in one university; campus-specific and geographic factors may have influenced responses. Further research is needed using samples from other universities and geographic regions. Our use solely of the Internet for sample recruitment and data collection rendered the conditions under which participants completed the survey subject to variation in location. Nonetheless,

the use of the Internet for data collection provided a cost- and time-effective means of reaching a broad segment of the campus population and offering a confidential, accessible way to complete the survey (Kaplowitz, Hadlock, & Levine, 2004). The response rate of 18% was somewhat low, although the final sample was large (more than 1,700 participants). Future researchers studying this phenomenon using Internet-based surveys may achieve higher response rates by including a mailed hard-copy invitation to participants prior to sending the e-mail invitations (Kaplowitz et al., 2004).

The primary limitation with the instrumentation used in this study relates to our use of new or modified instruments to assess some of the variables under study. These new and modified instruments have not been subjected to rigorous scale development procedures and were not validated prior to this investigation. An additional limitation is that this study did not control for the potential influence of participants' history of other forms of abuse victimization, which has been shown to be linked to both intimate partner violence (e.g., Carr & VanDeusen, 2002; Pipes & LeBov-Keeler, 1997) and self-injury (e.g., Levenkron, 1998). Finally, this study is limited by its lack of inclusion of assessment instruments to measure coping strategies and other relevant developmental issues among college students. The lack of inclusion of such instruments means that the relationship between dating violence and self-injury experiences may be spurious. Therefore, additional research is needed that is longitudinal and takes into account these other relevant variables to understand more fully the extent to which dating violence and self-injury experiences are related among college students.

Directions for Future Research

The results of this study justify the need for further investigation into the links between dating violence and self-injury among college students. We recommend that future research be conducted with larger samples representing broader geographic diversity and types of college campuses. On the basis of the findings of this study as well as previous research, we propose the following questions for future research: (a) How do coping strategies mediate the relationship between experiences of dating violence and self-injury among college students? (b) What developmental characteristics (e.g., academic performance and family, peer, and dating relationship characteristics) are related to college students' experiences of dating violence and self-injury? (c) How do traditional-age students compare with non-traditional-age students in their experiences of intimate partner violence and self-injury? (d) What do longitudinal research methods identify as the causal relationships between dating violence and self-injury? (e) How do experiences of self-injury differ for dating violence victims and perpetrators? (f) What factors are useful for identifying students at a greater risk for dating violence and self-injury? (g) What influence does history of other forms of abuse victimization have on the relationship between dating violence and self-injury? and (h) What are effective intervention strategies for addressing concurrent dating violence and self-injury? Finally, the inclusion of coping variables was beyond this study's

scope. Therefore, future research examining the links between dating violence and self-injury among college students should include a focus on coping strategies and other developmental issues to more fully and confidently understand the theoretical links between dating violence and self-injury.

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